

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Previously presented) An extrusion coated substrate having a coating comprising a polyethylene produced by polymerization catalysed by a single site catalyst and comprising as comonomers to ethylene at least two C₄₋₁₂ alpha olefins.
2. (Previously presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises as comonomers to ethylene at least two alpha olefins selected from but-1-ene, hex-1-ene, 4-methyl-pent-1-ene, hept-1-ene, oct-1-ene, and dec-1-ene.
3. (Previously presented) An extrusion coated substrate as claimed in claim 2 wherein said polyethylene comprises an ethylene butene copolymer and an ethylene hexene copolymer.
4. (Previously presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises a bimodal terpolymer comprising
 - a) a lower molecular weight copolymer of ethylene and but-1-ene
 - b) a higher molecular weight copolymer of ethylene and a C₅ to C₁₂ alpha-olefin,
5. (Previously presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises a bimodal polymer comprising

a) a lower molecular weight polymer which is a binary copolymer of ethylene and a C₄ to C₁₂ alpha-olefin and

b) a higher molecular weight polymer which is either a binary copolymer of ethylene and but-1-ene, if the lower molecular weight polymer of a) is a binary copolymer of ethylene and a C₅ to C₁₂ alpha-olefin, or a terpolymer of ethylene, but-1-ene and a C₅ to C₁₂ alpha-olefin.

6. (Currently amended) An extrusion coated substrate as claimed in claim 1 ~~to 5~~ wherein said polyethylene has an MWD 3 to 6, an MFR₂ of 5 to 20 g/10min and a density of 905 to 930 kg/m³.

7. (Currently amended) An extrusion coated substrate as claimed in claim 1 ~~to 6~~ wherein said polyethylene has a heat sealing force which varies by less than 2N/25.4 mm over a temperature range of at least 30°C.

8. (Currently amended) An extrusion coated substrate as claimed in claim 1 ~~to 7~~ wherein said coating comprises LDPE.

9. (Previously presented) An extrusion coated substrate as claimed in claim 8 wherein LDPE forms 15 to 35 wt% of the coating.

10. (Currently amended) An extrusion coated substrate as claimed in claim 1 ~~to 9~~ comprising multiple coating layers.

11. (Currently amended) An extrusion coated substrate as claimed in claim 1 ~~to 10~~ wherein said substrate is paper, cardboard, a polyester film, cellophane, polyamide film, polypropylene film, oriented polypropylene film or aluminium foil.

12. (Previously presented) The use of a polyethylene produced by polymerization catalysed by a single site catalyst and comprising as comonomers to ethylene at least two different C₄₋₁₂ alpha olefins in extrusion coating or for the formation of cast films.

13. (Previously presented) A process for extrusion coating a substrate comprising extruding a multimodal polyethylene produced by polymerization catalysed by a single site catalyst and which comprises as comonomers to ethylene at least two different C₄₋₁₂ alpha olefins to form a polymer melt and coating a substrate with said melt.

14. (Previously presented) A process as claimed in claim 13 wherein said polyethylene is produced in a two-stage process comprising a loop reactor followed by a gas phase reactor.

15. (Currently amended) A process as claimed in claim 13 ~~or 14~~ wherein said polyethylene is blended with LDPE prior to extrusion.